

## Recovery Plan Action Status

**Plan Name:** Recovery Plan for the Mohave Tui Chub, *Gila bicolor mohavensis*

**Plan Status:** Final

**Plan Date:** 12-Sep-84

**Lead Agency:** USFWS

**Lead Office:** Ventura Fish And Wildlife Office

(805)  
644-1766 )

Species	Action Priority #	Action #	Action Description	Action Status	Est. Initiation Date	Est. Completion Date	Responsible Parties	Work Type	Labor Type	Action Comments
Mohave tui chub ( <i>Gila bicolor mohavensis</i> )	1	11111	Monitor water quality at Soda Spring	Not Started			Desert Studies Consortium, U.S. Bureau of Land Management	Research: General	Contract	
Mohave tui chub ( <i>Gila bicolor mohavensis</i> )	2	11112	Determine water budget at Soda Springs	Not Started			U.S. Bureau of Land Management	Research: General	Contract	
Mohave tui chub ( <i>Gila bicolor mohavensis</i> )	1	11113	Maintain sufficient water quantity at Soda Springs	Ongoing Current	Prior to FY 1995		U.S. Bureau of Land Management	Management: Habitat Maintenance and Manipulation	Internal Field Assistance	
Mohave tui chub ( <i>Gila bicolor mohavensis</i> )	1	11114	Remove sediments and aquatic vegetation as appropriate at Soda Springs	Ongoing Current	FY 2007	FY 2007	U.S. Bureau of Land Management	Management: Habitat Maintenance and Manipulation	Internal Technical Assistance	Performed using CDFG equipment and volunteers
Mohave tui chub ( <i>Gila bicolor mohavensis</i> )	2	1112	Develop and implement management plan for Soda Springs	Ongoing Current	FY 2000 - FY 2004		U.S. Bureau of Land Management	Management: Planning	Internal Administrative	Includes Mojave National Preserve, FWS, and California Department of Fish and Game
Mohave tui chub ( <i>Gila bicolor mohavensis</i> )	2	1121	Conduct census annually at Soda Springs	Ongoing Current	FY 2009	FY 2007	California Department of Fish and Game	Research: Population Surveys	Graduate Student	North Dakota State University
Mohave tui chub ( <i>Gila bicolor mohavensis</i> )	2	1122	Mix populations if necessary at Soda Springs	Not Started			California Department of Fish and Game	Management: General	Internal Administrative	
Mohave tui chub ( <i>Gila bicolor mohavensis</i> )	2	1211	Enlarge fish habitat at China Lake Naval Weapons Center	Unknown			California Department of Fish and Game, United States Navy	Management: General	Contract	
Mohave tui chub ( <i>Gila bicolor mohavensis</i> )	2	1212	Monitor water quality and flow rates at China Lake Naval Weapons Center	Unknown			United States Navy	Research: Habitat Status	Contract	
Mohave tui chub ( <i>Gila bicolor mohavensis</i> )	3	1221	Conduct census annually at China Lake Naval Weapons Center	Ongoing Current	FY 2011	FY 2009	California Department of Fish and Game, United States Navy	Research: Population Surveys	Contract, Internal Administrative	California department of Fish and Game, contractors of China Lake, FWS

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Mohave tui chub (Gila bicolor mohavensis)	2	1222	Mix populations if necessary at China Lake Naval Weapons Center	Not Started			California Department of Fish and Game	Management: General	Contract	
Mohave tui chub (Gila bicolor mohavensis)	1	1311	Enlarge fish habitat at DRS	Discontinued			Desert Research Station, Barstow School District	Management: Habitat Maintenance and Manipulation	Contract	
Mohave tui chub (Gila bicolor mohavensis)	2	1312	Monitor water quality at DRS	Discontinued			Desert Research Station, Barstow School District	Research: Habitat Status	Contract	
Mohave tui chub (Gila bicolor mohavensis)	2	1321	Conduct census as required	Discontinued			Desert Research Station, Barstow School District, California Department of Fish and Game	Research: Population Surveys	Contract	
Mohave tui chub (Gila bicolor mohavensis)	2	1322	Mix populations if necessary at DRS	Discontinued			California Department of Fish and Game	Management: General	Contract	
Mohave tui chub (Gila bicolor mohavensis)	3	211	Determine suitability as a refugium at Camp Cady Wildlife area	Complete	Prior to FY 1995	Prior to FY 1995	California Department of Fish and Game	Management: Habitat Maintenance and Manipulation	Species Expert	One pond contains fish at Camp Cady. A second is being considered
Mohave tui chub (Gila bicolor mohavensis)	3	212	Construct habitat at Camp Cady Wildlife area	Complete	Prior to FY 1995	Prior to FY 1995	California Department of Fish and Game	Management: Habitat Maintenance and Manipulation	Species Expert	California Department of Fish and Game constructed two ponds and stocked MTCs. West Pond currently has fish. East pond went dry. Pond is being restored for future re-establishment of MTCs to the Camp Cady population
Mohave tui chub (Gila bicolor mohavensis)	3	213	Prepare management plan for Camp Cady Wildlife Area	Not Started			California Department of Fish and Game	Management: Planning	Contract	
Mohave tui chub (Gila bicolor mohavensis)	3	214	Implement management plan including introduction of Mohave tui chubs at Camp Cady Wildlife Area	Ongoing Current	Prior to FY 1995		California Department of Fish and Game	Management: Reintroduction	Species Expert	
Mohave tui chub (Gila bicolor mohavensis)	3	221	Determine suitability as a refugium at Afton Canyon Campground Pond	Not Started			U.S. Bureau of Land Management, California Department of Fish and Game	Research: Habitat Status	Species Expert	

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Mohave tui chub (Gila bicolor mohavensis)	3	222	Develop and implement a land protection plan for Afton Canyon	Not Started			U.S. Fish and Wildlife Service, Land Acquisition Program	Management: Planning	Species Expert	
Mohave tui chub (Gila bicolor mohavensis)	3	223	Control exotic species at Afton Canyon Campground Pond	Not Started			U.S. Bureau of Land Management, California Department of Fish and Game	Management: Predator and Competitor Control	Species Expert	
Mohave tui chub (Gila bicolor mohavensis)	3	224	Prepare management plan for Afton Canyon Campground Pond	Not Started			U.S. Bureau of Land Management	Management: Planning	Species Expert	
Mohave tui chub (Gila bicolor mohavensis)	3	225	Implement management plan including introduction of Mohave tui chubs at Afton Canyon Campground Pond	Ongoing Current			U.S. Bureau of Land Management, California Department of Fish and Game	Management: Planning	Species Expert	Afton Canyon Campground Pond no longer exists. Established population at XXX instead which fulfills the intention of the recovery plan (to establish additional populations). The criteria are to preserve the existing 3 populations and establish 3 additional populations. Afton Canyon is suggested as one site for establishment, but not the only option. XX is a more appropriate site; therefore, it fulfills 1 of the 3 sites.
Mohave tui chub (Gila bicolor mohavensis)	3	231	Determine suitability for a refugium at Mohave Narrows Regional Park	Obsolete			California Department of Fish and Game	Management: Reintroduction	Species Expert	
Mohave tui chub (Gila bicolor mohavensis)	3	232	Improve and/or construct habitat at Mohave Narrows Regional Park	Obsolete			California Department of Fish and Game	Management: Habitat Maintenance and Manipulation	Contract	
Mohave tui chub (Gila bicolor mohavensis)	3	233	Prepare management plan for Mohave Narrows Regional park	Obsolete			San Bernardino County, California, California Department of Fish and Game	Management: Planning	Species Expert	

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Mohave tui chub (Gila bicolor mohavensis)	3	234	Implement management plan including introduction of Mohave Tui Chubs at Mohave Narrows Regional Park	Obsolete			San Bernardino County, California, California Department of Fish and Game	Management: General	Internal Administrative	
Mohave tui chub (Gila bicolor mohavensis)	3	241	Evaluate flood potential and effects on stream morphology for mainstream Mohave River	Ongoing Current	Prior to FY 1995		U.S. Bureau of Land Management	Research: General	Species Expert	
Mohave tui chub (Gila bicolor mohavensis)	3	242	Enhance habitats at mainstream Mohave River	Not Started			U.S. Bureau of Land Management	Management: Habitat Maintenance and Manipulation	Species Expert	
Mohave tui chub (Gila bicolor mohavensis)	3	243	Control exotic species at mainstream Mohave River	Not Started			California Department of Fish and Game	Management: Predator and Competitor Control	Species Expert	
Mohave tui chub (Gila bicolor mohavensis)	3	244	Develop management plan for mainstream Mohave River	Not Started			U.S. Bureau of Land Management	Management: Planning	Species Expert	
Mohave tui chub (Gila bicolor mohavensis)	3	245	Implement management plan including introduction of Mohave tui chubs at mainstream Mohave River	Not Started			California Department of Fish and Game	Management: Planning	Species Expert	
Mohave tui chub (Gila bicolor mohavensis)	3	251	Monitor Transplants	Ongoing Current	FY 2009		U.S. Bureau of Land Management, California Department of Fish and Game	Research: Propagation	Species Expert	
Mohave tui chub (Gila bicolor mohavensis)	3	252	Mix populations if necessary [at transplant sites]	Not Started			California Department of Fish and Game	Management: Propagation	Species Expert	
Mohave tui chub (Gila bicolor mohavensis)	3	26	Examine suitability of additional sites	Ongoing Current	FY 2000 - FY 2004		U.S. Bureau of Land Management	Management: Reintroduction	Internal Field Assistance, Internal Technical Assistance	Looking at Mojave National Preserve, San Bernardino National Forest, Edwards Air Force Base and other locations
Mohave tui chub (Gila bicolor mohavensis)	3	31	Determine losses from bird predation	Not Started			U.S. Fish and Wildlife Service, Endangered Species Division, California Department of Fish and Game	Research: Predation	Species Expert	

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Mohave tui chub (Gila bicolor mohavensis)	2	32	Determine spawning requirements and early life history	Ongoing Current	FY 2000 - FY 2004		U.S. Fish and Wildlife Service, Endangered Species Division, California Department of Fish and Game	Research: General	Graduate Student	Have documentation and a paper on how to spawn Mohave tui chubs in captivity
Mohave tui chub (Gila bicolor mohavensis)	2	33	Determine physiological tolerances of Mohave tui chubs to various water quality parameters	Ongoing Not Current	FY 2000 - FY 2004		Desert Research Station, Barstow School District, Desert Studies Consortium, U.S. Fish and Wildlife Service, Endangered Species Division, California Department of Fish and Game, United States Navy	Research: Habitat Requirements	Species Expert	
Mohave tui chub (Gila bicolor mohavensis)	2	34	Determine population genetics	Complete	FY 2000 - FY 2004	FY 2007	U.S. Fish and Wildlife Service, Endangered Species Division, California Department of Fish and Game, United States Navy	Research: Genetics	Graduate Student	Completed. Bottleneck effect exists to a degree at locations except China Lake
Mohave tui chub (Gila bicolor mohavensis)	2	35	Conduct electrophoretic studies of Mohave tui chubs, arroyo chubs and their hybrids	Obsolete			U.S. Fish and Wildlife Service, Endangered Species Division, California Department of Fish and Game	Research: Genetics	Graduate Student	Electrophoresis will not be used to determine this.
Mohave tui chub (Gila bicolor mohavensis)	2	36	Encourage continuing studies of tui chubs	Ongoing Current	Prior to FY 1995		Desert Research Station, Barstow School District, California Department of Fish and Game	Research: General	Contract	research has been completed on effects of Asian tapeworm; initiated on competition with Gambusia and hybridization with arroyo chubs
Mohave tui chub (Gila bicolor mohavensis)	3	37	Incorporate findings into management and recovery plans	Ongoing Current	Prior to FY 1995		U.S. Bureau of Land Management, U.S. Fish and Wildlife Service, Endangered Species Division, California Department of Fish and Game	Management: Planning	Internal Administrative	

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Mohave tui chub (Gila bicolor mohavensis)	1	41	Enforce applicable State and Federal laws	Ongoing Current	Prior to FY 1995		U.S. Bureau of Land Management, U.S. Fish and Wildlife Service, Law Enforcement Division, California Department of Fish and Game	Other: Law Enforcement	Internal Administrative	
Mohave tui chub (Gila bicolor mohavensis)	2	42	Evaluate effectiveness of applicable laws and regulations	Ongoing Current	Prior to FY 1995		U.S. Bureau of Land Management, U.S. Fish and Wildlife Service, Endangered Species Division, California Department of Fish and Game	Management: General	Internal Administrative	
Mohave tui chub (Gila bicolor mohavensis)	3	51	Provide information to press, TV and radio	Ongoing Current	FY 2007		U.S. Bureau of Land Management, U.S. Fish and Wildlife Service, Endangered Species Division, California Department of Fish and Game, United States Navy	Other: Information and Education	Internal Administrative	Positive newspaper article published in the Victorville Daily Press
Mohave tui chub (Gila bicolor mohavensis)	3	52	Prepare and distribute brochure on recovery rationale	Not Started			U.S. Fish and Wildlife Service, Endangered Species Division	Other: Information and Education	Internal Administrative	
Mohave tui chub (Gila bicolor mohavensis)	3	53	Prepare appropriate articles for popular and scientific publication	Not Started			U.S. Fish and Wildlife Service, Endangered Species Division, California Department of Fish and Game	Other: Information and Education	Graduate Student	
Mohave tui chub (Gila bicolor mohavensis)	3	54	Create and maintain interpretive centers	Ongoing Current	FY 2007		San Bernardino County, California, U.S. Bureau of Land Management, California Department of Fish and Game	Other: Information and Education	Volunteer	Being developed cooperatively with the Lewis Center, CDFG, and FWS at the Lewis Center